

We Claim:

1. A connecting element for connecting a transducer to a sealed fluid system, comprising at least one inlet channel, at least one outlet channel and a measuring chamber connected to said inlet channel and said outlet channel in such a way as to allow a flow to pass through said measuring chamber, the measuring chamber being formed in a housing and part of the wall of the measuring chamber being formed by a membrane which is significantly more compliant than the remaining part of the wall of the measuring chamber, wherein the measuring chamber has an inlet opening and an outlet opening respectively at the level of parts of the wall which are situated opposite one another and form an edge of the measuring chamber in that part of the wall opposite the membrane which forms a ceiling of the measuring chamber, and the ceiling is drawn-in in a central area of the measuring chamber, so that an annular-channel-shaped part of the measuring chamber with a greater distance between the membrane and the ceiling and a central area of the measuring chamber with a smaller distance between the ceiling and the membrane are obtained, and the wall of the measuring chamber is designed such that it is free from any edges with the exception of the inlet and outlet openings and the transition from the membrane to the remaining part of the wall.
2. The connecting element as claimed in claim 1, wherein the annular-channel-shaped part of the measuring chamber is bounded on its outer circumference by the edge and connects the inlet opening to the outlet opening in such a way that it allows a flow to pass through.

3. The connecting element as claimed in claim 1, wherein, in the central area, the ceiling is designed approximately in the form of a spherical cap.
4. The connecting element as claimed in claim 1, wherein the edge-free part of the wall has curvatures with a radius of at least one millimeter.
5. The connecting element as claimed claim 1, wherein the inlet and outlet openings lie approximately in a plane parallel to the membrane.
6. The connecting element as claimed in claim 5, wherein the distance of the plane in which the inlet and outlet openings lie from the membrane is no more than 3 mm.
7. The connecting element as claimed in claim 1, wherein the cross section of the inlet opening is larger than the cross section of the outlet opening.
8. The connecting element as claimed in claim 1, wherein the width of the inlet opening is at least 90% of the length of the inlet opening.
9. The connecting element as claimed in claim 1, wherein the width of the outlet opening is no more than  $\frac{2}{3}$  of the length of the outlet opening.

10. The connecting element as claimed in claim 1, wherein the cross section of the outlet channel has no sudden changes in cross-sectional area up to the outlet opening.

11. The connecting element as claimed claim 1, wherein a channel selected from the group consisting of said inlet channel said outlet channel and combinations thereof is arranged inclined with respect to a plane parallel to the membrane.

12. The connecting element as claimed in claim 11, wherein a degree of inclination of the channel and/or of the at least one outlet channel with respect to a plane parallel to the membrane is selected from the group consisting of a degree of approximately  $15^{\circ}$  to  $45^{\circ}$ , a degree of approximately  $15^{\circ}$  to  $30^{\circ}$ , and a degree of approximately  $20^{\circ}$ .

13. The connecting element according to claim 1, wherein, in the region of the membrane, there is further provided a coupling device for the detachable mechanical coupling of the connecting element to a transducer, wherein the coupling device is part of a snap-on connection between said connecting element and said transducer.

14. The connecting element as claimed in claim 13, wherein the coupling device for the mechanical coupling of the connecting element to a transducer is designed such that the connecting element can be mounted on a transducer in a direction approximately

perpendicular to a plane which is defined by at least one of said inlet channels and at least one of said outlet channels.

15. The connecting element as claimed in claim 13, wherein the connecting element comprises the membrane and a one-part plastics injection molded component, said molded component comprising a first connection for the connection to an infusion apparatus, a second connection for connection to a patient, a housing, and said coupling device.